

Claims:

1. A coupling method of an optical fiber coupler with maximum flat coupling spectrum of a pair of optical fibers, comprising:
 - (1) Combining the pair of optical fibers with different photosensitivity in parallel, and heating and extending specific portions of the optical fibers to form a fused portion and packaged in a substrate;
 - (2) Irradiating the pair of optical fibers by intense ultraviolet light (hereafter referred to as UV radiation) at the same time;
 - (3) adjusting UV radiation and laying the fused portion under focus of the UV radiation for a period of time for making refractive index of the pair of optical fibers markedly different and asymmetric to decrease maximum coupling ratio; and
 - (4) supervising floating state of a peak of light energy loss spectrum of the fused portion by an optical spectrum analyzer, and turning off the UV radiation when the loss spectrum arrives at maximum flat area.
2. The coupling method of the optical fiber coupler as claimed in claim 1, wherein the pair of optical fibers comprises a boron-germanium codoped optical fiber of excellent photosensitivity and a single-mode optical fiber of poor photosensitivity.
3. The coupling method of the optical fiber coupler as claimed in claim 1, further comprising a stage having three axes for adjusting the position of the optical fibers.
4. The coupling method of the optical fiber coupler as claimed in claim 3, further comprising an image catching device aiming at the focus of the UV radiation on the stage with image being shown on a monitor.
5. The coupling method of the optical fiber coupler as claimed in claim 3, wherein a fiber attenuator and an optical device are provided behind the UV radiation for adjusting irradiation of the UV radiation on the stage.
6. The coupling method of the optical fiber coupler as claimed in claim 1,

wherein the length of the fused portion is determined according to requirements of wavelength spectrum of optical communication.